

## **REMARKS**

In the Office Action, the Examiner rejected all pending claims 1, 15, 28-31, 33, and 36-42. In view of the following remarks, Applicants respectfully request reconsideration and allowance of all pending claims.

### **Claim Rejections under 35 U.S.C. § 112**

The Examiner rejected claims 37-42 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Examiner stated that “[s]ince the new claims are presented for the first time [in the previous RCE/Response], applicants are requested to indicate how each claim limitation is supported by the application as originally filed.” Office Action, page 2. Applicants respectfully traverse this rejection.

The subject matter of all new claims presented in the last RCE/Response is fully supported by the specification of a parent (Hottovy, U.S. Patent No. 6,239,235, filing date July 15, 1997), which includes the incorporated Hanson (U.S. Patent No. 4,424,341) reference. For clarity, Applicants will cite (listed below) to Hottovy 6,239,235 and Hanson 4,424,341 in pointing to support in the present specification for the new claims presented in the previous RCE/Response.

***Support for New Claims Presented in Last Response***

37. A process, comprising:

polymerizing at least one monomer in a reactor to produce a slurry comprising solid

polymer particles and a liquid; (*see, e.g., Hottovy 6,239,235, col. 1, lines 4-5col.*

*3, lines 39-41; col. 8, lines 2-6).*

withdrawing substantially continuously via a valve a discharge slurry from the reactor,

the discharge slurry comprising withdrawn solid polymer particles and withdrawn

liquid, wherein the discharge slurry has a solids concentration greater than the

solids concentration of the slurry in the reactor; (*see, e.g., Hottovy 6,239,235, col.*

*2, line 3 – col. 3, line 7; col. 4, lines 27-31).*

modulating the valve to adjust a flow rate of the discharge slurry to facilitate control of a

pressure in the reactor; (*see, e.g., Hottovy 6,239,235, col. 5, lines 1-12).*

passing the discharge slurry from the reactor through a heated conduit to vaporize at least

a majority of the liquid in the discharge slurry; and (*see, e.g., Hottovy 6,239,235,*

*col. 4, lines 32-41).*

separating a vapor from the heated discharge slurry in a separator. (*see, e.g., Hottovy*

*6,239,235, col. 4, lines 32-54; Hanson 4,424,341, col. 3, lines 15-32; col. 4, lines*

*9-12).*

38. The process of claim 37, comprising maintaining the solids concentration of the

slurry in the reactor at 40 weight percent or greater. (*see, e.g., Hottovy 6,239,235,*

*col. 10, lines 23-26).*

39. The process of claim 37, comprising maintaining the solids concentration of the discharge slurry as it is withdrawn from the reactor at 50 weight percent or greater. (*see, e.g., Hottovy 6,239,235, col. 8, lines 19-23*).
40. The process of claim 37, wherein the separator comprises a flash drum. (*see, e.g., Hottovy 6,239,235, col. 4, lines 32-54*).
41. The process of claim 37, wherein the separator comprises a cyclone. (*see, e.g., Hottovy 6,239,235, col. 4, lines 51-54; Hanson 4,424,341, col. 3, lines 15-32; col. 4, lines 9-12*).
42. The process of claim 37, comprising condensing the separator vapor without compressing the separator vapor. (*see, e.g., Hottovy 6,239,235, col. 4, lines 57-60*).

In view of the citations to the present specification listed above in support of the new claims, Applicants believe the present rejection under Section 112, first paragraph, to be moot. Accordingly, Applicants respectfully request that the Examiner withdraw the foregoing rejection under Section 112, first paragraph, and to allow the claims.

### **First Rejection under 35 U.S.C. § 103(a)**

In the Office Action, the Examiner rejected claims 1, 15, 28-31, 33, and 36-42 under 35 U.S.C. § 103(a) as being unpatentable over Kendrick et al. (U.S. Patent No. 6,204,344) in view of Hanson (U.S. Patent No. 4,424,341). Applicants respectfully traverse this rejection. As explained below, the *Kendrick reference is not prior art* with regard to the present claims, which have an earlier effective filing date than the Kendrick reference. Therefore, the present rejection, which is based on a combination of the *Kendrick* and Hanson '892 references, should be withdrawn, and the instant claims allowed.

### ***All Present Claims are Supported by Parent***

The subject matter of all claims in the present application is fully supported by the specification of a parent (Hottovy, U.S. Patent No. 6,239,235, filing date July 15, 1997) of the present application. Initially, Applicants note that this parent (Hottovy) incorporates by reference Hanson (U.S. Patent No. 4,424,341) which can support present claims. *See* 37 C.F.R. § 1.57(f); Hottovy, col. 4, lines 51-54. Again, all present claims are supported by the parent. *See, e.g.*, Hottovy, col. 2, lines 11-14 and 60-67; col. 3, lines 7-9 and 40-59; col. 4, lines 32-36; col. 5, lines 6-11; Hanson '341, col. 3, lines 15-28; col. 4, lines 9-12. No present claims require support from information added in the present continuation-in-part filed October 31, 2003. Therefore, all present claims have an effective filing date of the parent Hottovy, which is July 15, 1997, and, thus, earlier than the apparent effective date of Kendrick.

In the "Response to Arguments" section of the Office Action, the Examiner stated:

The instant claims are not support [sic] in the cited sections of Hottovy and Hanson '341 because the process disclosed in Hottovy together with Hanson '341 requires separation of the

polymer slurry intermediate product by a flush [sic] tank first and then further separate[s] the liquid portion of the polymer slurry by a cyclone rather than separating the polymer slurry intermediate product in a cyclone directly as required by claims 1, 15, 28-31, 33, and 36.

Office Action, page 4 (emphasis added).

To the contrary, Hanson '341 supports the direct processing of polymer slurry intermediate product via a cyclone. For example, Hanson discloses the processing of intermediate slurry vapor via a cyclone 25 by placing the cyclone 25 inside the flash chamber 25 rather than connecting the cyclone to an overhead conduit of the flash chamber. *See* Hanson '341, col. 4, lines 9-12. Indeed, Hanson '341 provides for the immediate processing of the concentrated intermediate slurry via placement of the cyclone 25 inside the flash chamber (rather than being connected to the flash chamber by a conduit). *See id.* Again, no present claims require support for information added in the present continuation-in-part filed October 31, 2003. As stated above, all present claims have an effective filing date of the parent Hottovy, which is July 15, 1997, and, thus, earlier than the apparent effective date of Kendrick.

***Kendrick is Not Prior Art***

Based on the face of the Kendrick reference (U.S. Patent No. 6,204,344), the Kendrick filing date is May 18, 1999, and the apparent priority date is March 19, 1999. Consequently, the cited Kendrick patent (6,204,344) is not prior art with regard to the present claims, which have an effective filing date of July 15, 1997. Thus, again, the current rejection should be withdrawn and all present claims allowed.

## **Second Rejection under 35 U.S.C. § 103(a)**

The Examiner also rejected claims 1, 15, 28-31, 33, and 36-42 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Tormaschy et al. (EP 0 432 555 A2) in view of respectively Hanson (U.S. Patent No. 5,597,892) and Hanson et al. (U.S. Patent No. 4,424,341). Applicants respectfully traverse this rejection.

All independent claims 1, 28, and 37 recite a continuous withdrawal of slurry from the loop reaction zone. The Examiner relied on Tromaschy to teach this feature. However, Tormaschy is completely silent with regard to a continuous withdrawal (e.g., continuous take-off) of slurry from the loop reactor. *See, e.g.*, Tormaschy, page 5, lines 40-43; Figure 1. Indeed, based on the date of the reference and on Applicants' understanding of the Tormaschy patent, Applicants believe that the Tormaschy systems incorporate the typical settling leg configuration, and not a continuous withdrawal from the reactor. See the enclosed Declaration of John D. Hottovy under 37 C.F.R. § 1.132 which is being filed herein with the present Response. Further, the two cited Hanson references do not obviate this deficiency of Tormaschy. Therefore, all claims are patentable over the cited combination.

In addition, the reference also does not teach withdrawing a slurry having an increase in solids concentration as compared with the slurry in the reactor, as recited in claims 28 and 37. *See* Tormaschy, col. 5, lines 53-58. The two cited Hanson references do not obviate this deficiency. Therefore, claims 28 and 37, and their dependent claims, are patentable over the cited combination for this reason as well. For these reasons, Applicants respectfully request that the Examiner withdraw the foregoing rejection under 35 U.S.C. § 103 and allow the claims.

**Conclusion**

Applicants respectfully submit that all pending claims should be in condition for allowance. However, if the Examiner believes certain amendments are necessary to clarify the present claims or if the Examiner wishes to resolve any other issues by way of a telephone conference, the Examiner is kindly invited to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,

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